

### DIGITAL LIGHTING BALLAST OSCILLATOR

#### ABSTRACT OF THE DISCLOSURE

An oscillator for a power converter control outputs a pulse train based on a charging time of a capacitor linked to a variable current source. A digital to analog converter (DAC) controls the variable current source in conjunction with a switch to determine the charging time of the capacitor. By varying the digital DAC input, the charging time of the capacitor is modified, thereby modifying the frequency of the pulse train. A comparator compares the capacitor voltage to a toggled threshold, which switches depending on whether the capacitor is charging or discharging. The comparator output supplies the pulse train that can be used in a half bridge switching arrangement for the power converter, which can also serve as an electronic ballast for a lamp.